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(54) Title: METHODS AND FORMULATIONS COMPRISING AGONISTS AND ANTAGONISTS OF NUCLEAR HORMONE RECEPTORS

(57) **Abstract:** Novel compounds, pharmaceutical compositions, and methods are provided for modulating processes mediated by nuclear hormone receptors. A partial or complete agonist or antagonist modulates, directly or indirectly, an activity of one or more nuclear hormone receptors for glucocorticoids (GRs), androgens (ARs), mineralocorticoids (MRs), progestins (PRs), estrogens (ERs), thyroid hormones (TRs), vitamin D (VDRs), retinoids (RARs and RXRs), peroxisomes (XPARs and PPARs), icosanoids (IRs), or one or more orphan receptors, such as steroid and thyroid receptors. Exemplary compounds of the disclosure are bacterial products, for example bacterial toxins, and these compounds are useful in screens for other antagonists and agonists. Related methods and compositions are provided for diagnosis, treatment and prevention of bacterial disease and associated or unrelated inflammatory, autoimmune, toxic (including shock), and chronic and/or lethal sequelae associated with bacterial infection.

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